

**SITUATION REPORT
INCIDENT COMMAND POST GOLD KING
GOLD KING MINE RELEASE INCIDENT
U.S. ENVIRONMENTAL PROTECTION AGENCY**



EPA Contractors collecting surface water samples.

Subject: EXECSUM / SITREP #27
Gold King Mine Release Incident
San Juan County, Colorado
Latitude: 37.8945 Longitude: -107.6384

From: Situation Unit, Incident Command Post Gold King
Date: 7 September 2015
Reporting Period: 0700 6 September 2015 through 0700 7 September 2015
Website: www.epa.gov/goldkingmine



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EXECUTIVE SUMMARY

Situation Summary

United States Environmental Protection Agency (U.S. EPA) Incident Command Post Gold King (ICPGK) is comprised of U.S. EPA Regions 8, 6 and 9.

Highlights, Key Updates/Changes

- ICPGK **finalized** the Gold King Mine Stakeholders Notification Plan. This plan will notify stakeholders throughout the entire watershed in Regions 8, 6, and 9 of any mine related activities which could potentially impact the watershed. The final plan is expected to be posted to the EPA GKM website.
- ICPGK continues to monitor relations with the Navajo Nation.

Objectives

- Ensure health and safety of the public and responders.
- Continue implementation of private well sampling and water deliveries.
- Establish strategy for MCL-exceeded private wells.
- Continue coordination with Federal, State, Tribal and local stakeholders.
- Continue management of mine water discharge.
- Continue mine dump and portal stabilization.
- Assess sediment impacts.
- Identify incident end points.
- Implement river alert and notification plan during mine site operations.
- Explore real time monitoring options.
- Continue water and sediment sampling along the Animas and San Juan Rivers.
- Evaluate need for delivery of feed for livestock on Navajo Nation.

Command Emphasis

For the next operational period, the ICPGK command emphasis will be:

- Safety of responders and the public
- Visitors to the mine site are required to go through a safety briefing.
- Incident personnel entering Southern Ute Tribal (SUT) lands must be escorted by a SUT member.
- All sampling operations in Navajo Nation must be conducted with law enforcement escort.
- Ensure information flow between ICP and Stakeholders is transparent.

The metrics provided in this Situation Report represent quantities reported for work completed on 6 September 2015. Press releases are presented in Attachment 1. Metrics table cells and report text highlighted in yellow represent a change/addition from the previous day's Situation Report.



1.0 BACKGROUND

The Gold King Mine (GKM) near Silverton, Colorado is a historic gold mine at an elevation of approximately 11,300 feet above mean sea level. The mine discharge includes acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The GKM workings have been inaccessible since 1995 when the mine portal collapsed.

On 5 August 2015, an estimated volume of up to three million gallons of water containing sediment and dissolved metals was suddenly released from the Gold King Mine adit. This water discharged into Cement Creek which feeds into the Animas River, and eventually flows into the San Juan River.

The ICPGK (located in Durango, Colorado) continues to assess and mitigate effects from the release. The U.S. EPA continues daily sampling of surface water and sediment from the Animas River, San Juan River and Cement Creek. Additionally, U.S. EPA continues to schedule sampling of private wells within an alluvial area surrounding the Animas River.

2.0 OPERATIONS

2.1 Mine Operations

A summary of mine operations is presented below.

- Completed installation of security gate for Gold King Mine. The security gate was installed approximately 50 yards past the guard post on the entrance to the Gold King Mine.
- Lime addition is ongoing (8 lbs every 9 min); flocculent used if needed.
- Automated lime hopper is being used to dispense lime.
- Diverting Gold King Mine water to the Red and Bonita (R&B) settling ponds.
- Installed oil boom modified with felt liner to act as sediment curtains and dissipate the energy flow of water through the R&B ponds.
- Monitoring of treatment process at 5 locations twice daily.
- Average flow rate of approximately 624 gallons per minute (gpm). Pre-treatment pH of 3.40 S.U. and post-treatment pH of 4.96 S.U.
- Continued construction of the Gladstone settling ponds 1 to 4. Installed lining in Pond #1.

ICPGK finalized the Gold King Mine Stakeholders Alert and Notification Plan. This plan is expected to be posted to the EPA GKM website. The plan will notify stakeholders throughout the entire watershed in Regions 8, 6 and 9 of any mine related activities that could potentially impact the watershed. The plan also includes a "notification only" alert for non-mine related activities such as a rainfall event. The Plan in its current form will remain in effect as long as work is ongoing at the GKM site. The Plan is intended to address the first level of notification and information sharing. Beyond this initial notification, all parties are responsible for assessing the incident and determining additional needs for response and notification. The plan is included as attachment 2 to this Situation Report.

2.2 River Sampling

Operational activities for surface water and sediment sampling are summarized below. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples.



Table 1 - Operations Sampling Summary			
Matrix	U.S. EPA Region	Qty. (6 Sep 2015)	Qty. (Cumulative)
Surface Water Samples	8	7	392
	6	9	330
	9	0	239
	Total	16	961
Sediment Samples	8	5	154
	6	9	343
	9	0	192
	Total	9	689

2.3 Private Wells / Fish Ponds / Sediment

2.3.1 Private Wells

Operational activities for private drinking water well sampling are summarized below.

The assessment focus area for private drinking water wells in Region 8 includes those private drinking water wells located within 300 feet of the banks of the Animas River (including connected canals), between Baker's Bridge and the Colorado/New Mexico state line. The assessment focus area for private drinking water wells in Region 6 includes those private drinking water wells located within 500 feet of the banks of the affected waterways (Animas River, San Juan River and connected canals) within the Animas River watershed in New Mexico. There has been no sampling of private drinking water wells in U.S. EPA Region 9.

Private well samples that have metals concentrations greater than the Maximum Contaminant Levels (MCLs) and were collected from private drinking water wells during the first sampling event were sampled a second time to confirm the analytical results. In Region 8, the second round of samples at a given property were collected from the tap. Residents that have MCL exceedances have been notified.

For Region 6 there was one private drinking water well, which had a primary MCL exceedance. The well exceeded the MCL for lead, and after further assessment by the State of New Mexico and EPA it was determined that the exceedance was unrelated to the GKM incident.

A summary of private drinking water well sampling is presented below.

Table 2 – Private Drinking Water Well Sampling Summary			
Matrix	U.S. EPA Region	Qty. (6 Sep 2015)	Qty. (Cumulative)
Private Drinking Water Well Samples Collected (from SCRIBE, includes QA/QC samples)	8	2	366
	6	0	285
Private Drinking Water Well Locations Inside Focus Area	8	0	45
	6	0	120
Private Drinking Water Well Locations Outside Focus Area	8	2	259
	6	0	0



Table 3 – Private Drinking Water Well Primary MCL Exceedances			
Matrix	U.S. EPA Region	Qty. (6 Sep 2015)	Qty. (Cumulative)
Within Focus Area: Private Drinking Water Wells Containing Contaminant Concentrations Above MCLs during Second Sampling Event	8	0	1
	6	0	1*
Outside of Focus Area: Private Drinking Water Wells Containing Contaminant Concentrations Above MCLs during Second Sampling Event	8	0	9
	6	0	0

*Note: One well in Region 6 exceeded the MCL for lead and after further assessment by the State of New Mexico and EPA, it was determined that the exceedance was unrelated to the GKM incident.

Private water well sampling in U.S. EPA Region 6 was completed on 27 August 2015 and is no longer ongoing in U.S. EPA Region 6.

2.3.2 Water Mitigation

No public water systems are currently affected by the release or response operations.

U.S. EPA purchased 1,232 cases of bottled water to supply the community. Public support activities completed are summarized below.

Table 4 - Public Support Summary							
Activity	Entity	5 Sep 2015			Cumulative		
		Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Potable Water Deliveries	US EPA R8	0	0			62,000	
Livestock / Agricultural Water Deliveries	US EPA R8	0	0		47	141,980	
	US EPA R6				59	1,104,990	
	US EPA R9	0	0		13	218,400	
	BIA*	0	0		7	975,888	
Agricultural Food Deliveries	US EPA R6				1		244
	US EPA R9	0		0	14		5,376

*Note: BIA- Bureau of Indian Affairs delivered non-potable water to seven locations in the Navajo Nation from approximately 12 August 2015 to 31 August 2015.

Bulk water delivery in Region 8 has been discontinued. Bottled water was also provided to **3** residences in Region 8. The Region 6 agriculture and livestock team demobilized on 20 August 2015. There have been no potable water deliveries by the U.S. EPA in Regions 6 and 9; nor agricultural food deliveries by U.S. EPA in Region 8.

The Southern Ute Indian Tribe (SUIT) has delivered drinking water and stock water to tribal members



within the Reservation boundary. Approximate volumes to-date include:

- 100 cases of bottled water
- 18 water dispensers units and 42 – five-gallon water containers (210 gallons total).
- 8,000 gallons of bulk water deliveries (there have been no new requests in the past two weeks)

SUIT Tribal Housing Services completed the installation of 14 RO filtration systems at potentially impacted tribal residences.

On 4 September 2015, ICPGK received a summary of water distribution metrics completed by the Bureau of Indian Affairs (BIA) for the Navajo Nation. The BIA provided the water to the Navajo Nation for livestock and agricultural use. A summary of the metrics is provided below:

- From 12 August to 31 August 2015, BIA delivered a total of approximately 975,888 gallons of water to seven stations located throughout Navajo Nation.
- The seven stations that received water were designated as follows: Upper Fruitland, Shiprock, Gadii Ahi, Teec, Aneth, Pt/Mexican Water and Monument Valley:
- For the seven locations, BIA serviced an average of 28 clients per day per location.

2.3.3 Other Mitigation Activities

U.S. EPA continues to conduct twice daily water quality field parameters measurements at Little Fishes, LLC and forwarding results to the owner. U.S. EPA continues to remove sediment in the trout ponds for a resident along the Animas River.

2.3.4 Water Tank Assessment & Demobilization

On or about 15 August 2015, 15 black steel tanks were delivered by the ERRS contractor to certain locations on the Navajo Reservation as part of the response to the Gold King Mine (GKM) Site. Each of these tanks is reported to have a capacity of 16,500 gallons. Until 4 September 2015, the number of tanks delivered had been reported as 13, but it was reported to the EPA OSC on 4 September 2015, that there were two additional tanks that had not previously been reported. These two tanks had been ordered by R6 personnel and were not being tracked by R9 personnel. On 4 September 2015, the EPA OSC confirmed the presence of these two additional tanks.

On 19 August 2015, two tanks at the Upper Fruitland location were removed by the ERRS contractor.

On 3 September 2015, the OSC and START conducted an assessment of the 11 known tanks (this did not include the two tanks that had not been reported until September 4).

On 4 September 2015, five tanks were demobilized by the ERRS contractor. This included the following tanks:

- Tank 31L Meadow Farms location (This tank had 6,000 gallons of water. This was the tank that the Navajo Nation initially believed was contaminated)
- Tanks 913 and 907 Area 3 West location (these tanks were empty)
- Tanks 914 and 906 New Meadows Location (these tanks were empty)



The Bureau of Indian Affairs (BIA) delivered water to these tanks. Metrics for water volumes are provided in Table 4 above.

3.0 PLANNING

3.1 Environmental Unit

The following post-sampling documents have been issued.

Activity	U.S. EPA Region	Qty. (6 Sep 2015)	Cumulative
Validated Analytical Results Letter to Private Drinking Water Well Owners (no MCL exceedance) (Validation date on or before 15 August 2015)	8	0	17
	6	0	0
	9	N/A	N/A

The Environmental Unit (EU) created a list of non-exceedance (of MCLs) private well owners that have not yet been contacted and forwarded the list to U.S. EPA Region 8 Drinking Water Senior Environmental Employees for direct phone contact. The list has a target of 319 phone contacts. U.S. EPA started making these calls on 3 September, 2015.

3.2 Resources

The table below summarizes staffing numbers for the federal entities and agencies active in the response.



Table 5 - Personnel On-Site		
Region	Agency / Entity	Number of Personnel (6 Sep 2015)
Mine	U.S. EPA	3
	U.S. Coast Guard	4
	U.S. EPA Contractors	8
	U.S. Army Corps of Engineers	0
	U.S. Geological Survey	0
	U.S. Bureau of Reclamation	0
ICPGK	U.S. EPA	27
	U.S. EPA Contractors	24
	USCG	3
	Other Federal, State, Local and Tribal Entities	2
6	U.S. EPA	0
	U.S. EPA Contractors	5
	USCG	0
	Other Federal, State, Local and Tribal Entities	0
9	U.S. EPA	0
	U.S. EPA Contractors	0
	USCG	0
	Other Federal, State, Local and Tribal Entities	0
Total		66

No unmet critical resource needs reported.

4.0 FINANCE

4.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response.

Table 6 - Estimated Response Costs Reported as of 6 September 2015					
Region	U.S. EPA * Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	U.S. EPA Cumulative Contractors Cost	Total Cumulative Costs
8	\$801,927	\$164,793	\$44,450	\$2,721,936	\$3,733,106
6	\$490,762	\$124,750	\$12,989	\$2,410,163	\$3,038,664
9	\$554,400	\$83,000	\$0	\$900,506	\$1,537,906
TOTAL	\$1,847,089	\$372,543	\$57,439	\$6,032,605	\$8,309,676

4.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.



Table 7 - Estimated Daily Burn Rates	
U.S. EPA Region	Estimated Daily Burn Rate (as of 6 Sep 2015)
8	\$129,560
6	\$41,990
9	\$60,816
Total	\$232,366

5.0 LOGISTICS

As of 6 September 2015, Logistics has received 28 overhead personnel requests that have been submitted to the Regions to fill. As of 6 September 2015, 10 of the 28 requests have been filled. There are nine overhead personnel requests that remain unfilled/open. Those assigned to the Mine Site or in the field need to complete proper check-in prior to going to the field assignment. You are also required to get a safety briefing prior to reporting to the field assignment.

6.0 SAFETY

Driving continues to be the number one hazard. Personnel are encouraged to follow defensive driving procedures when conducting field activities and driving around town. They should factor in the long driving time needed and distance to the mine and field work sites to the daily work shift.

Work/Rest regimens need to be followed to reduce heat stress and keep workers hydrated. Take water with you when you leave the ICP for field activities.

ICPKG has a Critical Incident Stress Management (CISM) program for personnel involved with the response. On 6 September 2015, the CISM center received 0 visits from response personnel. To date, the CISM center has received 200 visits.

No recordable accidents were reported for 6 September 2015.

7.0 PUBLIC INFORMATION

7.1 Community Engagements

No community engagements occurred on 6 September 2015.

Table 8 - Community Engagement Summary		
Description	U.S. EPA Region	Qty. (6 Sep 2015)
Community Engagements	8	0
	6	0
	9	0



7.2 Anticipated Events: VIPs/Congressional Visits and Public Events

Known site visits and public events for the next 14 days are summarized below.

Table 9 - Anticipated Site Visits and Public Events Summary	
Planned Event	Anticipated Date
Update meeting with La Plata County	9 September 2015
Meeting with La Plata County Technical Subcommittee	14 September 2015

7.3 Community Relations Branch

Effective 27 August 2015, calls to the Regional Call Center (970-385-8700) regarding the Gold King Mine Release Incident are being directed to the National Call Center (844-607-9700). The National Call Center is now being operated by U.S. EPA Headquarters. A total of 809 calls were received at the Regional Call Center during its operation by former Area Command (AC). A total of 223 calls were received at the National Call Center during its operation by AC, this included 120 calls related to Region 8, 67 calls related to Region 6 and 38 calls related to Region 9.

8.0 LIAISON

Federal, regional, local and other entities participating in the response are summarized below.

U.S. EPA
U.S. Coast Guard (USCG)
U.S. Fish and Wildlife Services (USFWS)

Colorado Office of Emergency Management (OEM)
Colorado Department of Public Health and Environment (CDPHE)
New Mexico Environment Department (NMED)
New Mexico (NM) Department of Health
NM Office of the State Engineer
NM Department of Game and Fish
State of Utah
State of Arizona

City of Durango
La Plata County
San Juan County
San Juan Basin Health Department
County of San Juan – New Mexico

Southern Ute Indian Tribe (SUIT)
Navajo Nation

9.0 SOURCE OF ADDITIONAL INFORMATION

For additional information, refer to www.epa.gov/goldkingmine.



ATTACHMENT 1
PRESS RELEASE



Exec. Sum/SITREP #27 (7 September 2015)
Gold King Mine Release Incident
ICP Gold King

NO PRESS RELEASES FOR 6 SEPTEMBER 2015




ATTACHMENT 2
GOLD KING MINE STAKEHOLDERS ALERT AND NOTIFICATION PLAN



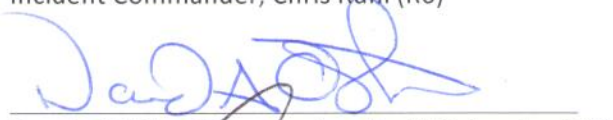
GOLD KING MINE STAKEHOLDERS ALERT AND NOTIFICATION PLAN

INCIDENT COMMAND GOLD KING (ICGK) 7 SEPTEMBER 2015

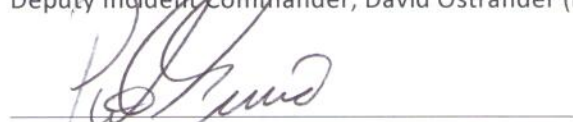
U.S. ENVIRONMENTAL PROTECTION AGENCY


Incident Commander, Chris Ruhl (R6)

9/7/15
Date


Deputy Incident Commander, David Ostrander (R8)

9/7/15
Date


Deputy Incident Commander, Peter Guria (R9)

9/7/15
Date





Incident: EPA Response to Gold King Mine Release Incident
Subject: Gold King Mine Stakeholders Alert and Notification Plan

Strategic Objectives:

1. Notify stakeholders throughout the entire watershed in Regions 8, 6 and 9 of any mine related activities that could potentially impact the watershed.
2. Intended to address the first level of notification and information sharing.

INTRODUCTION

The Gold King Mine Stakeholders Alert and Notification Plan will notify stakeholders throughout the entire watershed in Regions 8, 6 and 9 of any mine related activities that could potentially impact the watershed. The Plan also includes a “notification only” alert for non-mine related activities such as a rainfall event. The Plan in its current form will remain in effect as long as work is ongoing at the GKM site. The Plan is intended to address the first level of notification and information sharing. Beyond this initial notification, all parties are responsible for assessing the incident and determining additional needs for response and notification.

Planning Scenario: This Plan is not intended to take the place of emergency action plans, spill plans, normal reporting requirements or action necessary for life safety events.

The framework of this Plan is based on the assumption that existing flows in the Animas River will affect timing and dilution. At a measured flow of 1000cfs at the USGS gauging station on the Animas River below Silverton, a spill or runoff event will likely take approximately the times listed below for each reach of river.

1. 30 minutes: Mine Operations to Silverton City limits
2. 30 minutes: Silverton to entrance of Animas River canyon
3. 10 hours: Animas River Canyon to Bakers Bridge
4. 10 hours: Baker’s Bridge to Northern Durango city limits
5. 6 hours: Northern Durango City Limits to Southern Ute Reservation Boundary
6. 12 hours: Southern Ute Reservation Boundary to NM State Line

ALERT LEVELS

Notification Only

- An identified non mine-site related event affecting Cement Creek or the Animas River that will not pose a physical or safety concern for downstream users, but may be perceived as a negative event by stakeholders, public, or the media.
- This could include a precipitation event causing discoloration of Cement Creek unrelated to mine operations, a storm event that may cause identifiable disturbance of sediment, or any other event that could cause limited discoloration of the Animas River.



Alert I

- An identified event at the mine site that is unlikely to cause any physical or safety concern, but may be negatively perceived by the public for impacts beyond Cement Creek.
- This could include a limited or temporary release of treated or untreated mine wastewater that may be identifiable through operator knowledge or observation or direct measurements of turbidity, or pH in mine waste discharge, that could occur anywhere above the USGS Gauging Stations before Silverton.
- This could also include identification of a storm event affecting mine site operations or causing significant runoff leading to discoloration through two or more reaches of the Animas River identified above.

Alert II

- An identified event that may have limited negative public perception for downstream users for physical and environmental effects.
- This could include a failure of treatment systems or storm event causing a shutdown of operations.
- This could include a surge of mine waste that overcomes current capabilities for a short period.
- This could include a major storm event that would mobilize sediment from several drainages and large amounts of mine waste sediment from the Animas River causing widespread identifiable turbidity and discoloration.

Alert III

- This will include all events that are or will likely cause large-scale environmental or physical safety effects.
- This will include events such as terrorism or an extreme vandalism event shutting down operations.
- This will include additional or imminent mine dump failures, catastrophic slope failure or similar event.

NOTIFICATION PROTOCOL

Notification Only

- On-site OSC to notify EPA ICP in Durango within 1 hour of identified event.
- EPA IC to determine need to log in daily Situation Report (SITREP).
- EPA ICP to E-mail stakeholder list (attached) by end of day.



Alert I

- On-site OSC to notify EPA ICP within 1 hour of identified event. Durango IC and Command Staff to be notified within 1 hour of EPA ICP notification.
- This event will be logged in daily SITREP.
- EPA ICP to E-mail to stakeholder list within one hour of EPA ICP notification.
- Stakeholder agencies should be notified by end of day or following morning if event occurs after 6PM.
- EPA ICP to hold strategy meeting and determine need for downstream monitoring or sampling.

Alert II

- On-site OSC to notify EPA ICP as soon as practical. Durango IC and Command Staff should be notified within 1 hour of EPA ICP notification.
- On-site OSC should attempt immediate phone contact with SJC EM or Sheriff. If unable, contact should be requested through radio link to CSP Montrose Dispatch Center.
- This event will be logged in daily SITREP.
- EPA IC to send E-mail to stakeholder list immediately upon EPA ICP notification.
- Stakeholder agencies should be verbally noticed within one hour of event. Only one contact per agency is necessary.
- EPA ICP to hold strategy meeting to determine downstream monitoring and/or sampling needs and activation of the JIC.

Alert III

- On-site OSC to notify EPA ICP as soon as practical. Durango IC and Command Staff should be notified immediately upon ICP notification.
- On-site OSC should attempt immediate phone contact with SJC EM or Sheriff. If unable, contact should be requested through radio link to CSP Montrose Dispatch Center.
- EPA IC should make notification to the National Response Center (800) 424-8802
- On-site OSC and EPA ICP should establish real-time communication.
- This event will be logged in daily SITREP.
- EPA IC to E-mail stakeholder list immediately upon EPA ICP notification.
- Stakeholder agencies should be verbally notified by EPA ICP as soon as practical. Only one contact per agency is necessary.
- EPA ICP to hold strategy meeting to determine downstream monitoring and/or sampling needs and activation of the JIC.
- EPA IC to schedule stakeholder briefing as soon as practical.